REMARKS

Rejection of the claims under 35 USC § 102:

Claims 7-11 and 19-28 have been rejected under 35 U.S.C. 102(b) as being anticipated by Pierce catalog as evidenced by Arpicco et al. The action states that a reasonable interpretation of the invention as instantly claimed appears to be a homo-bi-functional crosslinker or hetero-bi-functional crosslinker. Applicants agree that the compound claimed can be interpreted to be a crosslinker. However, Applicants believe that the compound as claimed is more limited than any disulfide-containing crosslinker. Applicants' claim requires that the disulfide bond remain labile (i.e. be cleaved more rapidly than glutathione) after being linked to molecules on either side of the disulfide bond. While Pierce may disclose disulfide bond-containing crosslinkers in which the disulfide bond is cleaved more rabidly than glutathione, the compounds disclosed by Pierce will not retain this property after crosslinking two molecules.

Pierce discloses the following crosslinkers that contain disulfide bonds potentially cleaved more rapidly than glutathione in their 2004 catalog: Sulfo-LC-SPDP, SPDP, SMPT, PDPH, Sulfo-SADP, SADP, Ellman's reagent, and AEDP.

Sulfo-LC-SPDP, SPDP, SMPT and PDPH each have a pyridyldithio reactive group which is reactive toward sulfhydryl (thiol) groups. The pyridyl group activates the disulfide bond. The disulfide bond of these reagents is itself part of the reactive group. Therefore, the disulfide bond is not located between at least two reactive groups as is required by the claims.

Similarly, the disulfide bond of Ellman's reagent is itself part of the reactive group. Therefore, the disulfide bond is not located between at least two reactive groups as is required by the claims.

Sulfo-SADP and SADP contain phenyl azide groups which are reactive towards amines. Reaction of these groups with amines results in loss of the electron withdrawing group from the vicinity of the disulfide bond. Therefore, after reaction of these crosslinkers with separate

molecules, the disulfide bond does not have an electron withdrawing group that facilitates cleavage of the disulfide bond as is required by the claims.

Similarly, the electron withdrawing groups of AEDP are lost when these crosslinkers form covalent bonds with separate molecules on each side of the disulfide bond. AEDP reacts with NHS-esters and amines via EDC activation to form amide bonds. The amide bonds do not contain electron withdrawing groups that facilitate cleavage of the disulfide bond such that the disulfide bond is cleaved more rapidly than oxidized glutathione. Thus, after crosslinking, the disulfide bond does not have an electron withdrawing group that facilitates cleavage of the disulfide bond as is required by the claims.

The Examiner's rejections are now believed to be overcome by this response to the Office Action. In view of Applicants' amendment and arguments, it is submitted that claims 7-11 and 19-26 should be allowable.

Respectfully submitted,

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I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as express mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this date: Oct. 24, 2005 .

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